INSTRUMENTS

INDUSTRIAL—SCIENTIFIC

Volume Two

1929

Managing Editor
Richard Rimbach

Engineering Editor
D. L. Mathias

Associate Editors

M. Hartenheim — M. Berg Rimbach

Abstract Editors

Wm. Boynton — John D. Gat — Dr. G. Neuendorf
Dr. E. S. Carney — M. E. Haas — M. Schrero
Erich Fetz — L. Nasarevich — Arthur Schroder

Advisory Abstract Editors

Wm. B. Gamble
Technology Librarian,
New York Public Library

E. H. McClelland
Technology Librarian,
Carnegie Library

Collaborators

Prof. F. C. Ashe
Dr. James Aston
R. V. Baud
Dr. G. Berndt
Dr. F. L. Bishop
Dr. W. G. Brombacher
Prof. Wm. G. Brown
Dr. Heber D. Curtis
Dr. A. V. De Forest
Prof. K. J. de Juhasz
R. L. Dunlap
O. W. Ellis
Dr. Waldemar Ewald
Paul B. Findley
A. A. Grubb
Prof. J. B. Grumbein
Robert G. Guthrie
Prof. Lester Hamilton
Dr. John L. Haughton
H. L. Hazeltine
John L. Hodgson
Prof. George Hosmer
Prof. J. W. Howard
Prof. Hans von Jueptner
Dr. Friedrich Koerber
Dr. V. M. Krivibok
A. A. Lebedeff
John M. Lessells
E. S. Lincoln
Richard R. Moore
Dr. Allen Leslie Norbury
Dr. Albert Parsons Sachs
Prof. P. H. Schweitzer
Dr. Harry Seltz
Dr. Foster D. Snell
Thomas Spooner
Francis M. Turner, Jr.
Prof. Joseph Lynch, S. J.
Dr. S. R. Williams
Prof. W. R. Work
C. B. Wright

Published the 15th of each month by

INSTRUMENTS PUBLISHING COMPANY

1117 WOLFENDALE STREET, PITTSBURGH, PA.

Copyright, 1929, by Instruments Publishing Company

VOLUME TWO

January to December, 1929

	PAGES
January	1– 48
February	49– 76
March	77–112
April	113–148
May	149–190
June	191–222
July	223–262
August	263–296
September	297–330
October	331–368
November	369–420
December	421–488

SUBJECT INDEX

A

Accelerometer, Solenoid 123
Aircraft Instrument Developments in 1928 19
Air Flow Measurement 443
Altitude Indicator, New DF-1 Level Flight 367
Altitude Temperature Correction Computer 469
Ammeter for Three Phase Circuits, Type HEA-3 39
Amplifying Comparator, New 281
Applications of the Electric Balance to the Continuous Solution of Mathematical Formulae 425
Arc Welding Plays Important Role in 1929, Lightning Studies 276
Automatic Instrument for Determining Thickness, Weight and Moisture 251
Automatic Process Control Instruments and Devices 169
Automatic Signal Lamp 325
Aviation Instrument—Gyrorector 462

B

Balance Design, Improvements 423
Balance, New Analytical 286
Blackness Meter 99
Brake Inspection Decelerometer 309
Bridge—Non-Inductive 221
Brinell Impression Indicator, Direct Reading 43

C

Calorimeter, New Recording Gas 213
Capsular Diaphragm, Tycos Inner Seal 41
Carbon Determination Apparatus, New Volumetric 475
Circuit Breaker, Type EAF 101
Circular—Chart Recorder, Substation Switchboard 315
Coker's Photo-Elastic Apparatus 261
Color Theory, The Ostwald 53, 85
Combustible Gas Indicator 105
Combustion Pipette, New Slow 363
Comparator, New 189
Comparator, New Amplifying 281
Compass, Magneto 478
Compression Indicator, New 418
Compression Instrument for Measuring the Strengths of Foundry Sands 243
Conductivity and Hydrogen Ion Measurements 209
Constant Temperature Equipment, New 275
Control, Improved Simplified Synchronous Visual Supervisory 219
Control Instruments and Devices, Automatic Process 169
Control of Hot-Blast Temperatures, Automatic 480
Control Pyrometer, A New 183
Controller, New Automatic Cycle 133
Culver Universal Differential Gauge 179
Current Meter, Water 379
Cycle Controller, New Automatic 133

D

Decelerometer, Brake Inspection 309
Delineascope, Spencer Lecture Table 364
Description of the Latest Forms of The Hilger Polarizing Instrument Known as Professor Coker's Photo-Elastic Apparatus 261
Determination of Coke Yields for the Coke Plant Based on a Distillation Test 239
Development During 1927–8, Electrical Instrument 13
Developments in 1928, Aircraft Instrument 19
Developments in Temperature Indicating, Recording and Control Instruments During 1928 23
Developments in the Field of Magnetic Measurements, Recent 5, 57
Dial Indicator, Model 80 Junior 190
Diaphragm Meter, Type GK, New 185
Differential Gauge, Culver Universal 179
Direct Current Instrument of Ultra Sensitivity 467
Direct Reading Brinell Impression Indicator 43
Distance Reading Gauge 285
Distant Repeater, Midworth 291

E

Elasticometer Spring Testing Machines for Tension and Compression Tests 465
Electric Instruments, Portable 274
Electric Time Switch, New 365
Electrical Instrument Development During 1927–8 13
Electrical Instruments in the Chemical Industries 203
Electrical Instruments, Miniature Portable Precision 317
Electrical Instruments, Portable 79
Electrically Operated Scale for Determining Moisture Content of Lumber in the Dry Kiln 472
Engine Indicator and Spark Plug, A New Electric 319
Engine Temperature Indicator for Aircraft Type DO-18 476

F

Fatigue Testing Machine, Rubber 322
Feed Water Regulator, New Thermo Hydraulic 255
Flight and Altitude Indicator, New DF-1 367
Flow Control at 1300-lb. Pressure and 600°F., Automatic 273
Flow Indicator, Fuel 455
Flow-Meter and Pressure Indicator, New 283
Frequency Controller—Proportional Step Type, Automatic 181
Frequency Meters, Indicating 371
Fuel Flow Indicator 455
Fuse and Voltage Tester, Johnson 187

G

Gas Calorimeter, New Recording 213
Gasoline Gauge, New Airplane 467
Glass Strain, Tester 107
Gravitometer, New Improved 259
Groundometer, An Instrument for Measuring the Resistance of Earth's Electrodes 293
Gyrorector 462

H

High-Pressure Flow Control 273
History—Joseph Willard Legg 51
Hot Blast Temperatures, Automatic Control of 480
Hydrogen Ion Measurements 209

PAGES

I

Improvements in Balance Design, Some . . . 423
Indicator for Combustible Gases, New . . . 405
Information on Instruments and Measurements, Searching for . . . 27, 69
Installing CO_2 Meter, Improved Method of 250
The Instrument Exhibits at The Iron & Steel Exposition, Pittsburgh, Pa. . . . 225
The Instrument Exhibits at The National Metal Exposition . . . 333
Instrument Exhibits at Twelfth Exposition of Chemical Industries . . . 195
Instruments for Production TestingWork . . . 459
Instrument Pioneers—Joseph Willard Legg 51
Instruments Publishing Company . . . 193
Integration of "Orifice Head" Charts by Means of Special Planimeters . . . 95

J

James Brake Inspection Decelerometer . . . 309
Johnson Fuse and Voltage Tester . . . 187

K

Kiln Boy . . . 217

L

Laboratory Apparatus as a Means of Works Control . . . 159
Legg, Joseph Willard—Instrument Pioneers . . . 51
Level Flight and Altitude Indicator, New DF-1 . . . 367
Light Intensity Meter . . . 471
Lightning Generator for Field Testing, Portable . . . 329
Liquid Meters, Xacto . . . 359
Littraw Auto Collimating Type Quartz . . . 361
Lucky Altitude Temperature Correction Computer . . . 469

M

Magnetic Measurements, Recent Developments in the Field of . . . 57
Magneto Compass, New . . . 478
Magneto Properties of Monel Metal, Some 129
Manometer is Combined Flow-Meter and Pressure Indicator, New . . . 283
The Measurement of Air Flow . . . 347, 379, 443
Measurements—Industrial and Scientific . . . 307
Measurements—
Industrial and Scientific . . . 337, 397, 433
"Megger" Instrument, New . . . 412
Microammeters, New Model J . . . 324
Micromanometer, Super . . . 125
Microphotometer, New Moll Recording . . . 456
Microscope, New Type Ultra . . . 143
Midworth Distant Repeater . . . 291
Miniature Portable Precision Instruments . . . 317
Moisture Content of Lumer in the Dry Kiln, Electrically Operated Scale for Determining . . . 472
Moisture Content of Lumber-Kiln Boy . . . 217
Moisture Determination, Automatic . . . 251
Moisture Determination in Damp Concreting Aggregates . . . 414
Moisture Meter, New . . . 215
Moll Recording Microphotometer, New . . . 456

N

Nigrometer . . . 99
Non-Inductive Bridge . . . 221
Non-Volatile Content . . . 269

O

Oil Spray Study, Some Instruments Used For . . . 299
Operation Recorder, Tetco Tim Seven Day 417
Ostwald Color Theory . . . 53, 85
Oxygen Regulator, Prest-O-Weld Two-Stage . . . 477

P

Photometer, New Polarization . . . 245
Physical Testing and Recording, A Demonstration of . . . 320
Planimeter, Radial . . . 227
Planimeters, Integration of "Orifice Head" Charts by Means of Special . . . 95
Polarization Photometer, New . . . 245
Polymeter, The New . . . 43
Portable Instruments . . . 274
Potentiometer, New Precision . . . 415
Potentiometer Pyrometer Recorder, New. 407
Potentiometer—The Treasure Chest . . . 484
Pressure Cell, Soil . . . 295
Pressure Indicator, New Manometer is Combined Flow Meter and . . . 283
Prest-O-Weld Two-Stage Oxygen Regulator . . . 477
Process Control Instruments and Devices, Automatic . . . 169
Production Testing Work, Instruments for 459
Proposed Tariff and Instruments . . . 151
Pulsating Currents, The Measurement of . . . 115
Pyrometer, A New Control . . . 183
Pyrometer Recorder, New Potentiometer . . . 407
Pyrometers, Type FD . . . 257

Q

Quartz Spectrograph, Model L 253 . . . 362
Quartz Spectrograph, Model L 251 Littrow Auto Collimating Type . . . 361

R

Radial Planimeter . . . 227
Radio Continuity Tester, New . . . 221
Radio Set Analyzer for Testing Screen Grid Tubes . . . 287
Radio Set Analyzer that Provides Simultaneous Readings . . . 288
Radio Set Tester, New Model 547 . . . 311
Rapid Determination of Moisture in Damp Concreting Aggregates without Computation . . . 414
Recorder, Substation Switchboard Circular —Chart . . . 315
Recorder, Tetco Tim Seven Day Operation 417
Recording Gas Calorimeter, New . . . 213
Recording Strut Thermometer, Minimum Temperature . . . 323
Regulator, New Thermo Hydraulic Feed Water . . . 255
Relay, A New Directional . . . 145
Resistance to Earth Measurements Groundometer . . . 293
Roundness Gauge, The Model 36 Federal . . . 279
Rubber Fatigue Testing Machine . . . 322

S

Saving Gasoline by Accurate Carburetor Adjustment . . . 265
Scale for Determining Moisture Content of Lumber in the Dry Kiln, Electrically Operated . . . 472
Scales, New Precision . . . 220
Searching for Information on Instruments and Measurements . . . 27, 69
Seismograph, The Wilip-Galitzin . . . 91
Service Breaker, New Meter . . . 321
Signal Lamp, Automatic . . . 325
Slide Rule for Filter Computations . . . 233
Softening Point Determinations, New Apparatus for . . . 277
Soil Pressure Cell . . . 295
Solenoid Accelerometer . . . 123
Solenoid Valves, Packless Type . . . 410
Solution of Mathematical Formulae, Applications of the Electric Balance to the Continuous . . . 425
Specific Gravity and Viscosity of Varnishes Paints, Etc . . . 65
Spectrograph, Quartz . . . 361
Spectograph, Quartz . . . 362
Spectrophotometric Outfit, New Universal 247
Spring Testing Machine, Elasticometer . . . 465
Stiffness Test for Paper, Light Cardboard, Foils and Membranes . . . 327
Stop Watches . . . 284
Strain Tester, Glass . . . 107
Super-Micromanometer . . . 125
Synchronous Visual Supervisory Control, Improved Simplified . . . 219
Syphon Pump, New . . . 109

T

Tachometer . . . 73
Tachometer Generator . . . 313
Tape Repair Outfit . . . 188
Tariff and Instruments, Proposed . . . 151
Temperature Equipment, New Constant . . . 275
Temperature Indicating and Recording and Control Instruments During 1928 . . . 23
Temperature Indicator for Aircraft Engine 476